

REMARKS

The Examiner is thanked for the thorough examination of the present application. The FINAL Office Action, however, continued to reject all claims 1-32. In response, application submits the foregoing amendments (in which claims 5-8 and 13-20 have been cancelled, thereby rendering moot the rejections under 35 U.S.C. § 101) and the following additional remarks.

Rejections under 35 U.S.C 103(a)

Claims 1-32 stand rejected under 35 U.S.C 103(a) as allegedly being unpatentable over Lann, "Single Machine Scheduling to Minimize the Number of Early and Tardy Jobs". Applicant respectfully requests reconsideration and withdrawal of these rejections.

With regard to claims 1, 9, 21, 25, and 29, Lann fails to disclose, suggest, or teach, inter alia, the following features, which are embodied in the claims:

*"identifying and selecting at least one of the first order within the first type orders **when a second order with a pull-in demand is received or a production event occurs during product manufacturing in the supplier**";*
*"pushing out the selected first order, and **directing the capacity reserved for the selected first order to meet the second order**".*

It is noted that, in the Lann reference, *the first job to be selected is the last non-penalized job to be scheduled, and in each iteration a job is selected that can be processed latest among the remaining jobs. Then, the selected G-jobs are scheduled to be completed at their due-dates.* It is clear that, ***the objective of the Lann reference is to minimize the number of penalized jobs, or to maximize the number of jobs that can be processed with no cost, wherein the jobs with no cost when it is completed within its time***

window. Additionally, in the Lann reference, ***algorithms 1 and 2 only relevantly disclose the sorting of jobs based on the corresponding due dates, and selecting of the jobs to be executed.***

In the claimed embodiments, the timing for identifying and selecting the first type order having the period delivery demand is ***when a second order with a pull-in demand is received or a production event occurs during product manufacturing in the supplier***. Nowhere does Lann disclose the selecting of jobs (the non-penalized jobs in the Lann reference) when a second order with a pull-in demand is received or a production event occurs during product manufacturing in the supplier.

In addition, in the claimed embodiments, the orders of the first type are candidates to be pushed out, and the orders of the second type can not be pushed out. Since the orders of both types may be in the system, the orders of the first type must be first identified and selected. It is noted that, in the claimed embodiments, the order selected to be pushed out is based on the order type (period delivery demand or on-schedule delivery demand). Orders having period delivery demand are the candidates to be selected. As described, Lann only relevantly discloses the sorting of jobs based on the corresponding due dates. Nowhere does Lann disclose the identifying and selecting of the first type order having a period delivery demand to be pushed out.

Further still, in the claimed embodiments, the number of orders of the first type may be reduced. That is, the first type orders (as the no-penalty jobs in Lann) may be pushed out to handle the second type orders (as the jobs with cost in the Lann reference). However, as described, the objective of the Lann reference is to minimize the number of

penalized jobs, or to maximize the number of jobs that can be processed with no cost. The two applications are fundamentally different.

In addition, the claimed embodiments are directed to capacity management. A production line or a factory has a limited capacity. Each order must be allocated with a corresponding capacity. In the claimed embodiments, when a second order with a pull-in demand is received, the ***capacity reserved for the selected first order is directed to meet the second order***. The Lann reference, however, only relevantly discloses the selecting jobs to be completed. Nowhere does Lann disclose the capacity replacement/exchange of first order and second order in the claimed embodiments.

Since Lann fails to teach the claimed features above of the invention, independent claims 1, 9, 21, 25 and 29 are patentable over the cited reference. Insofar as claims 2-4 directly or indirectly depend from claim 1, claims 10-12 directly or indirectly depend from claim 9, claims 22-24 directly or indirectly depend from claim 21, claims 26-28 directly or indirectly depend from claim 25, and claims 30-32 directly or indirectly depend from claim 29 are similarly believed to be patentable. Further, dependent claims are also patentable based on their own features.

In view of the foregoing remarks, the applicants respectfully request the Examiner's reconsideration of the application and the timely allowance of claims.

For at least the foregoing reasons, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference

would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

No fee is believed to be due in connection with this submission. If, however, any fee is deemed to be payable, you are hereby authorized to charge any such fee to Deposit Account No. 20-0778.

Respectfully submitted,

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